CHAPTER 7

MANAGEMENT OF HAZARDOUS SHELF-LIFE MATERIELS

7-1. GENERAL

A. The purpose of this chapter is to provide an overview of Hazardous Materiel/Hazardous Waste (HAZMAT/HW) management, and to provide specifics of DoD's Hazardous Materiel Control and Management (HMC&M) program. See DLAM 4145.11/TM 38-410 /NAVSUP PUB 573/AFJMAN 23-209/MCO P 4450.12, for storage and handling of hazardous materiels.

B. Personnel involved in the management, storage, and use of shelf-life materiel shall be committed to ensuring that the generation of HW is eliminated or minimized through pollution prevention initiatives and effective management and storage practices. This includes source reduction techniques, use of alternative materiels and processes, recycling and proper and/or variable assignment of units of issue during the initial acquisition process.

C. Section 2 of the Pollution Prevention Act establishes the following pollution prevention hierarchy as a National Policy declaring that:

1. Pollution should be prevented or reduced at the source whenever feasible.

2. Pollution that cannot be prevented should be recycled in an environmentally safe manner whenever feasible.

3. Pollution that cannot be prevented or recycled should be treated in an environmentally safe manner whenever feasible.

4. Disposal or other release into the environment should be employed only as a last resort and should be conducted in an environmentally safe manner. The first option is preferred as a true pollution prevention practice. However, any change to procedures or processes which would move waste management practices up the pollution prevention hierarchy is assumed to yield environmental benefits and should be evaluated.

D. References to effective management, storage and use of hazardous materiels are contained throughout this manual.

7-2. HAZARDOUS MATERIEL (HAZMAT) IDENTIFICATION

A. Hazardous Materiel (HAZMAT) . The definition set forth in FED-STD 313, identifies regulated HAZMAT with respect to its Federal Supply Nomenclature.

B. Hazardous Waste (HW) . HW is that HAZMAT which cannot be defined by the Resource Conservation and Recovery Act (RCRA) of 1976, thus requiring special disposal through landfill, incineration, or other methods .

7-3. HAZMAT MANAGEMENT

A. HAZMAT management has historically placed more emphasis on the collection, management, and disposal of HW rather than the reduction of HW entering the waste stream. The RCRA of 1976 provides guidance in this area.

B. Source reduction? as identified by the Pollution Prevention Act of 1990, emphasizes reducing the amount of any hazardous substance, pollutant, or contaminant entering any waste stream or otherwise released into the environment prior to recycling, treatment, or disposal. Executive Order 12856, dated 3 August 1993, requires Federal Agencies to comply with the provisions of the Pollution Prevention Act.

C. DoD Directive 4210.15, Hazardous Material Pollution Prevention, places emphasis on the reduced use of hazardous materiels in products rather than simply managing the HW created. Reduction in the use of HAZMAT can be accomplished in part by:

1. Using only standard stock numbered HAZMAT when feasible that has been scrubbed for “green” items.

2. Improving materiel management policies and procedures by practicing prudent shelf-life item management.

3. Emphasizing procurement of less or non hazardous items.

a. Materiel substitution whereby more products containing recycled or easily recycled materiels are used.

b. Increased use of affirmative or “green” procurements (e.g., re-refined oil, recycled anti-freeze, recycled paper products) .

7-4. MODEL FOR HAZARDOUS MATERIEL AND HAZARDOUS WASTE (HW) MANAGEMENT

A. Military activities must comply with Federal, State, Host Nation and local directives. Federal directives emanate from EPA, DOT, FDA, CPSC, NRC, OSHA etc. It should be noted that EPA has levied fines against military installations and individuals for compliance infractions . In addition to Government regulation, military activities must comply with DoD Service directives and host nation final governing standards.

B. A six-step process for managing HAZMAT and HW has been developed and is outlined below. The overall objective of the management program is to eliminate or reduce to the maximum extent HW/HAZMAT and carefully dispose of the remainder. The program is divided into the following segments:

1. Compliance with Federal, State, Host Nation and local directives.

2. HW Reduction.

3. HAZMAT Minimization.

4. HAZMAT/HW Re-use.

5. HAZMAT/HW/Recycling/Reclamation.

6. HW Disposal.

7-5. COMPLIANCE WITH FEDERAL, STATE, HOST NATION AND LOCAL DIRECTIVES

A. The RCRA is an EPA-regulated program which requires industry and the Government to strictly control the storage, record-keeping, and disposal of HW.

B. The Pollution Prevention Act prescribes that U.S. National Policy is to prevent or reduce pollution at the source whenever feasible, to recycle materiel to avoid pollution, to treat in an environmentally safe manner, and to dispose of materiel only as the last resort. The Transportation Safety Act of 1974 (Public Law 93-633) provides direction for the DOT to control the quantity and form of HAZMAT/HW being transported along public thoroughfares.

C. Hazardous Communication (HAZCOM) , 29 CFR Part 1910.1200 This is an OSHA-mandated program intended to ensure that the hazards of all chemicals produced or imported are evaluated, and that information concerning their hazards is distributed to employers and employees. The program requires container labeling and other forms of warnings, employee training, and the use of Materiel Safety Data Sheets (MSDS) .

D. Final Governing Standards for the Overseas Environmental Baseline Guidance documents are prepared by teams composed of U.S. Forces and host nation representatives, and address all environmental laws and standards requiring compliance.

7-6. HAZARDOUS WASTE (HW) REDUCTION AND ELIMINATION

A. This step is usually accomplished by engineering changes and development of testing procedures. The objective is to eliminate completely or reduce the requirement for HAZMAT, and ultimately the generation of HW.

1. Engineering changes through product redesign. Examples of this are the use of a rustless product materiel to eliminate the need for painting or surface treatment; the use of mechanical instead of chemical cleaning; non-toxic soaps instead of hazardous solvents; water based glues and paints instead of oil based coverings; and recycling and reutilization of HAZMAT to eliminate or reduce HW generation.

2. Testina Procedures . Another aspect of the elimination step is hazardous testing, where products are tested to determine their true toxicity and whether declassification as an HAZMAT is possible.

3. Subcontracting. This occurs when a local commercial activity can perform cleaning and painting functions for an installation. Although this does not eliminate the HW problem, it can shift the primary responsibility for its disposal away from the government. However, in the case of some substances and processes, DoD may still retain primary responsibility for waste disposal even if it is subcontracted to a commercial vendor.

7-7. HAZMAT MINIMI ZATION

A. Product Substitution; Disposal of hazardous waste, and the subsequent higher level of regulation that accompanies this

disposal, can be subsequently reduced if less HAZMAT is introduced at the front end of the waste stream.

B. Authorized Use: Use stricter guidelines for authorizing HAZMAT for a particular process. For example, standardizing the use of solvents or cleaners will significantly reduce the volume of HAZMAT subject to disposal.

C. Process Control: Provide for the separation of effluent to avoid mixture of hazardous effluent with other non-hazardous waste which contributes to the volume of HW produced.

7-8. HAZMAT/HW REUSE. This step allows reuse of the effluent with little or no treatment. This can occur through the separation and reuse in a dirtier operation (e.g., counter flow rinses) , or using a filter to separate dirt (e.g., alcohols and paint) . Perhaps collecting waste and reusing it can be accomplished for operations not requiring pure solvents during a process (e.g., some plating operations) .

"7-9. HAZMAT/HW RECYCLE AND RECLAMATION. Recycling takes place when significant treatment is required to use the effluent for its original purpose. Recycling can be accomplished by the DoD Activity onsite, or off site (on-site by a vendor, or off-site by a vendor) . Reclamation involves returning the original product to its original specification for future use.

7-1o. HAZMAT/HW TREATMENT/DISPOSAL

A. Treatment. This step requires special permits, equipment and careful coordination with EPA, and state and local authorities . Within DoD it can be done by the activity, or vendor. Treatment involves processing waste to a non-hazardous or less hazardous substance through chemical or physical treatment or volume reduction methods. This process usually includes incineration or neutralization to less toxic or reduced volumes of HW.

B. Land Disposal. Land fills, deep well injection, and land forming are examples of land disposal.

'C. Export , Treat Or Destrov Off-Site. Transportation of HW off-site does not remove the liability from an activity once the waste -is either sold to a vendor or legally destroyed. This step involves the establishment of service contracts between the Government and commercial firms.

D. Disposal Off-Site. This step uses the same techniques as disposal on-site. However, this is the least desirable option since an activity's liability for the HW does not end.

7-11. HAZMAT REUSE STORE, PHARMACY , AND RECOUPMENT FACILITY

A. Hazardous Reuse Stores, Pharmacies and Recoupment Facilities are facilities where turned-in HAZMAT in good condition is redistributed to users at no cost. HAZMAT such as shelf-life expired paints, solvents, and excess hazardous materiels are commonly turned in to the DRMO for disposal as hazardous waste. These facilities divert these materiels from disposal, thereby reducing disposal costs. At the same time, the tenant activities save money by obtaining materiels from these facilities at no cost except for transportation.

B. Reuse Stores are operated by both Navy and Air Force.

C. Pharmacies are operated by the Air Force and Army.

D. Recoupment facilities are operated by DLA.

E. DoD Components shall make maximum use of these facilities where available. Where not available, efforts shall be made to establish a facility. Guidelines for instituting Reuse Stores are available in Navy Consolidated Hazardous Materiel Reutilization and Inventory Management Program (CHRIMP) . The Navy Shelf-Life Program Administrator should be contacted for a copy of this Publication. Pharmacy information may be obtained from the Air Force Civil Engineer, Recoupment administrator or the Army Shelf-Life Administrator. Facility operation information can be obtained by contacting the DLA Administrator for the DoD Shelf- Life Program.

7-12. Department of Defense (DoD) HAZMAT/HW GUIDANCE

A. DoD 6050.5-M pertains to procedures of the DoD Hazardous Materiels Information System (HMIS). This system provides reference data in four primary areas: MSDS, warning label, and disposal. This manual provides direction to each of the Military Services on the proper management of hazardous materiel.

B. Joint Publication DLAM 4145.11/AM 38-410/NAVSUP PUB 573, AFJMAN 23-209/MCO P4450-12M, STORAGE AND HANDLING OF HAZARDOUS MATERIEL, provides direction to the Military Services on the storage and handling of hazardous materiels.